SCOTT THOMPSON
EXECUTIVE DIRECTOR

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
GOVERNOR

August 20, 2014

(b) (6)

Dear Mr. and Mrs (b) (6)

The Oklahoma Department of Environmental Quality (DEQ) sampled water from your house well on June 26, 2014 as part of a reoccurring sampling event that will be performed approximately every three months. DEQ has offered this sampling to residents that live on, or adjacent to the Wilcox Oil Company Superfund Site. You are receiving this letter because you have provided DEQ permission to enter your property and collect a water sample from your well.

DEQ sampled for three types of contaminants that can be found on historical refinery locations. Those are: Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs) and Metals.

The first page of the sampling data is for VOCs. Results of the sampling are located in the Results column. The "<" symbol indicates that the substance was not detected in the sample. The next three pages are for SVOCs, and the last page for Metals. The "<" symbol in the Qualifier column indicates that the substance was not detected. No VOC or SVOC chemicals were detected in the water sample from your well. Several metals were detected at normal levels that are not considered to be a health risk. Lead was detected at 25.5 ug/l, which is above the Maximum Contaminant Level (MCL) of 15 ug/l for drinking water. DEQ will perform follow up sampling of your well in August 2014 to confirm if lead is present. Attached with this letter is a lead fact sheet from the Agency for Toxic Substances and Disease Registry (ATSDR). If you have further questions about health risks from lead in your water please contact Monty Elder, the DEQ risk assessor, at 405-702-9132.

The purpose of this sampling event was not to fully define the extent or type of contamination that may be present on the Wilcox Site. All potential health risks from the Site are unknown at this time. Further soil, sediment, surface water and ground water testing will be required in the future to determine how best to clean up the Wilcox Site.

If you have questions about this letter or the sampling data, do not hesitate to call me at (405) 702-5136. Please contact Bart Canellas with the U.S. Environmental Protection Agency at (214) 665-6662 with any questions about the EPA Superfund process or plans for the Wilcox Site.

Sincerely,

W. Todd Downham

Todd Downham
Project Manager, Wilcox Oil Company Superfund Site
Land Protection Division
Oklahoma Department of Environmental Quality

9535486

c. Bart Canellas, U.S. EPA Dallas

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

LEAD

CAS # 7439-92-1

Division of Toxicology and Environmental Medicine ToxFAQs™ August 2007

This fact sheet answers the most frequently asked health questions (FAQs) about lead. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to lead can happen from breathing workplace air or dust, eating contaminated foods, or drinking contaminated water. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Lead can damage the nervous system, kidneys, and reproductive system. Lead has been found in at least 1,272 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is lead?

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States.

What happens to lead when it enters the environment?

- ❑ Lead itself does not break down, but lead compounds are changed by sunlight, air, and water.
- ❑ When lead is released to the air, it may travel long distances before settling to the ground.
- ❑ Once lead falls onto soil, it usually sticks to soil particles.
- ❑ Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil.

How might I be exposed to lead?

- ❑ Eating food or drinking water that contains lead. Water pipes in some older homes may contain lead solder. Lead can leach out into the water.
- ❑ Spending time in areas where lead-based paints have been used and are deteriorating. Deteriorating lead paint can contribute to lead dust.
- ❑ Working in a job where lead is used or engaging in certain hobbies in which lead is used, such as making stained glass.
- ❑ Using health-care products or folk remedies that contain lead.

How can lead affect my health?

The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production.

How likely is lead to cause cancer?

We have no conclusive proof that lead causes cancer in humans. Kidney tumors have developed in rats and mice that had been given large doses of some kind of lead compounds. The Department of Health and Human Services

(DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

How can lead affect children?

Small children can be exposed by eating lead-based paint chips, chewing on objects painted with lead-based paint, or swallowing house dust or soil that contains lead.

Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood.

How can families reduce the risks of exposure to lead?

- ❑ Avoid exposure to sources of lead.
- ❑ Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.
- ❑ If you have a water lead problem, run or flush water that has been standing overnight before drinking or cooking with it.
- ❑ Some types of paints and pigments that are used as make-up or hair coloring contain lead. Keep these kinds of products away from children
- ❑ If your home contains lead-based paint or you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house of dust and tracked in soil.

Is there a medical test to determine whether I've been exposed to lead?

A blood test is available to measure the amount of lead in your blood and to estimate the amount of your recent exposure to lead. Blood tests are commonly used to screen children for lead poisoning. Lead in teeth or bones can be measured by X-ray techniques, but these methods are not widely available. Exposure to lead also can be evaluated by measuring erythrocyte protoporphyrin (EP) in blood samples. EP is a part of red blood cells known to increase when the amount of lead in the blood is high. However, the EP level is not sensitive enough to identify children with elevated blood lead levels below about 25 micrograms per deciliter (µg/dL). These tests usually require special analytical equipment that is not available in a doctor's office. However, your doctor can draw blood samples and send them to appropriate laboratories for analysis.

Has the federal government made recommendations to protect human health?

The Centers for Disease Control and Prevention (CDC) recommends that states test children at ages 1 and 2 years. Children should be tested at ages 3–6 years if they have never been tested for lead, if they receive services from public assistance programs for the poor such as Medicaid or the Supplemental Food Program for Women, Infants, and Children, if they live in a building or frequently visit a house built before 1950; if they visit a home (house or apartment) built before 1978 that has been recently remodeled; and/or if they have a brother, sister, or playmate who has had lead poisoning. CDC considers a blood lead level of 10 µg/dL to be a level of concern for children.

EPA limits lead in drinking water to 15 µg per liter.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for lead (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013

General Inquiries: 1-866-412-3057

SAMPLE INFORMATION

Sample Number: 045614.001
Description: WR-1
Sample Address: (b) (6) [redacted]

Collected By: TD
Collected: 6/26/14 2:40 pm
Received: 6/27/14 9:27 am

TEST RESULTS

Analysis: Volatile Organic Compounds **Analysis Method:** EPA 524.3

Component Name	Result	Unit	Qualifiers	Analyst	Analysis Date
1,1,1-Trichloroethane	<0.5	µg/L		OFP	7/1/14
1,1,2-Trichloroethane	<0.5	µg/L		OFP	7/1/14
1,1-Dichloroethene	<0.5	µg/L		OFP	7/1/14
1,2,4-Trichlorobenzene	<0.5	µg/L		OFP	7/1/14
1,2-Dichlorobenzene	<0.5	µg/L		OFP	7/1/14
1,2-Dichloroethane	<0.5	µg/L		OFP	7/1/14
1,2-Dichloropropane	<0.5	µg/L		OFP	7/1/14
1,4-Dichlorobenzene	<0.5	µg/L		OFP	7/1/14
Benzene	<0.5	µg/L		OFP	7/1/14
Carbon Tetrachloride	<0.5	µg/L		OFP	7/1/14
Chlorobenzene	<0.5	µg/L		OFP	7/1/14
cis-1,2-Dichloroethene	<0.5	µg/L		OFP	7/1/14
Ethylbenzene	<0.5	µg/L		OFP	7/1/14
Methyl tert-Butyl Ether (MtBE)	<0.5	µg/L		OFP	7/1/14
Methylene Chloride	<0.5	µg/L		OFP	7/1/14
Styrene	<0.5	µg/L		OFP	7/1/14
Tetrachloroethene	<0.5	µg/L		OFP	7/1/14
Toluene	<0.5	µg/L		OFP	7/1/14
trans-1,2-Dichloroethene	<0.5	µg/L		OFP	7/1/14
Trichloroethene	<0.5	µg/L		OFP	7/1/14
Vinyl Chloride	<0.5	µg/L		OFP	7/1/14
Xylenes	<0.5	µg/L		OFP	7/1/14

Sample Number: 538353
Project Code: SW-WE
Agency Number:
Date Collected: 6/26/2014
Time Collected: 1440
Date Received: 6/27/2014
Date Completed: 07/07/2014
Collected By: TD
PWS Id:
Location Code:
Station:
Facility:
Report Date: 7/7/2014

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE ENVIRONMENTAL LABORATORY
707 N. ROBINSON
OKLAHOMA CITY
OKLAHOMA, 73102-6010
General Inquiries: 1-866-412-3057
or selsd@deq.ok.gov

Report of Analysis by GCMS

EPA Drinking Water Certification #OK00013

To: TODD DOWNHAM/LPD

CC: FILE COPY

Name	Qualifier		Value	Units	Analyzed	Method	Prep Type
Dilution Factor, Extractab			0.85		07/03/14		
Acenaphthylene		<	17.0	UG/L	07/03/14	8270DM	
Acenaphthene		<	17.0	UG/L	07/03/14	8270DM	
Anthracene		<	17.0	UG/L	07/03/14	8270DM	
Benzo(b)fluoranthene		<	17.0	UG/L	07/03/14	8270DM	
Benzo(k)fluoranthene		<	17.0	UG/L	07/03/14	8270DM	
Benzo(a)pyrene		<	17.0	UG/L	07/03/14	8270DM	
Bis(2-chloroethyl)ether		<	17.0	UG/L	07/03/14	8270DM	
Bis(2-chloroethoxy)methane		<	17.0	UG/L	07/03/14	8270DM	
Bis(2-chloroisopropyl)ethe	UJ	<	17.0	UG/L	07/03/14	8270DM	
Butylbenzylphthalate		<	17.0	UG/L	07/03/14	8270DM	
Chrysene		<	17.0	UG/L	07/03/14	8270DM	
Diethylphthalate		<	17.0	UG/L	07/03/14	8270DM	
Dimethylphthalate		<	17.0	UG/L	07/03/14	8270DM	
Fluoranthene		<	17.0	UG/L	07/03/14	8270DM	
Fluorene		<	17.0	UG/L	07/03/14	8270DM	
Hexachlorocyclopentadiene	UJ	<	17.0	UG/L	07/03/14	8270DM	
Hexachloroethane in water		<	17.0	UG/L	07/03/14	8270DM	
Indeno(123cd)pyrene		<	17.0	UG/L	07/03/14	8270DM	
Isophorone		<	17.0	UG/L	07/03/14	8270DM	
Nitrosodipropylamine		<	17.0	UG/L	07/03/14	8270DM	
Nitrosodiphenylamine		<	17.0	UG/L	07/03/14	8270DM	
Nitrobenzene		<	17.0	UG/L	07/03/14	8270DM	
p-Chloro-m-cresol	MI	<	17.0	UG/L	07/03/14	8270DM	
Phenanthrene		<	17.0	UG/L	07/03/14	8270DM	
Pyrene		<	17.0	UG/L	07/03/14	8270DM	
Benzo(ghi)perylene		<	17.0	UG/L	07/03/14	8270DM	
Benzo(a)anthracene		<	17.0	UG/L	07/03/14	8270DM	
Dibenzo(ah)anthracene		<	17.0	UG/L	07/03/14	8270DM	
2-Chloronaphthalene		<	17.0	UG/L	07/03/14	8270DM	
2-Chlorophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
2-Nitrophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
Di-n-octylphthalate		<	17.0	UG/L	07/03/14	8270DM	

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Name	Qualifier		Value	Units	Analyzed	Method	Prep Type
2,4-Dichlorophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
2,4-Dimethylphenol	MI	<	17.0	UG/L	07/03/14	8270DM	
2,4-Dinitrotoluene		<	17.0	UG/L	07/03/14	8270DM	
2,4-Dinitrophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
2,4,6-Trichlorophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
2,6-Dinitrotoluene		<	17.0	UG/L	07/03/14	8270DM	
3,3'-Dichlorobenzidine		<	17.0	UG/L	07/03/14	8270DM	
4-Bromophenylphenyl ether		<	17.0	UG/L	07/03/14	8270DM	
4-Chlorophenyl phenylether		<	17.0	UG/L	07/03/14	8270DM	
4-Nitrophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
4,6-Dinitro-o-cresol	MI	<	17.0	UG/L	07/03/14	8270DM	
Phenol	MI	<	17.0	UG/L	07/03/14	8270DM	
Naphthalene		<	17.0	UG/L	07/03/14	8270DM	
Pentachlorophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
Bis(2-ethylhexyl)phthalate		<	17.0	UG/L	07/03/14	8270DM	
Di-n-butylphthalate		<	17.0	UG/L	07/03/14	8270DM	
Hexachlorobenzene		<	17.0	UG/L	07/03/14	8270DM	
Hexachlorobutadiene		<	17.0	UG/L	07/03/14	8270DM	
Dibenzofuran		<	17.0	UG/L	07/03/14	8270DM	
2-Methylnaphthalene		<	17.0	UG/L	07/03/14	8270DM	
2-Methylphenol	MI	<	17.0	UG/L	07/03/14	8270DM	
4-Methylphenol	MI	<	17.0	UG/L	07/03/14	8270DM	
2,4,5-Trichlorophenol	MI	<	17.0	UG/L	07/03/14	8270DM	
4-Chloroaniline		<	17.0	UG/L	07/03/14	8270DM	
2-Nitroaniline		<	17.0	UG/L	07/03/14	8270DM	
3-Nitroaniline		<	17.0	UG/L	07/03/14	8270DM	
4-Nitroaniline		<	17.0	UG/L	07/03/14	8270DM	
1,4-Dichlorobenzene	MI	<	17.0	UG/L	07/03/14	8260BM	
1,2,4-Trichlorobenzene		<	17.0	UG/L	07/03/14	8260BM	

SURROGATE RECOVERIES	
COMPOUND	RECOVERY %
2-FLUOROBIPHENYL	52
NITROBENZENE-D5	46

Sample Number: 538353
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Report of Analysis by GCMS

EPA Drinking Water Certification #OK00013

To: TODD DOWNHAM/LPD CC: FILE COPY

COMPOUND	SURROGATE RECOVERIES RECOVERY %
P-TERPHENYL-D14	96
2-FLUOROPHENOL	33
PHENOL-D5	23
2,4,6-TRIBROMOPHENOL	67

COMPOUND	TENTATIVELY IDENTIFIED BY NBS LIBRARY SEARCH	VALUE	UNITS

NA

Summary

Labs performing analysis on this Sample:
Metals GCMS

SOURCE: WILCOX

SAMPLERS COMMENTS:
(b) (6) WR-1

SAMPLE RECEIVING COMMENTS:
ICE; SAMPLE= 1.3

ANALYST`S COMMENTS:
Rachel M. Allen (8270DM).
(MI) Matrix interference.
(UJ) The material was analyzed for but was not detected at or above the reporting limit (RL). The associated value is an estimate and may be inaccurate or imprecise.

* * ANALYST

Sample Number: 538353
Project Code: SW-WE
Agency Number:
Date Collected: 6/26/2014
Time Collected: 1440
Date Received: 6/27/2014
Date Completed: 07/18/2014
Collected By: TD
PWS Id:
Location Code:
Station:
Facility:
Report Date: 7/18/2014

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Report of Analysis by Metals

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Name	Qualifier	Value	Units	Analyzed	Method	Prep Type
Arsenic, Total	<	2.00	UG/L	07/16/14	200.8	200.8
Barium, Total		162	UG/L	07/16/14	200.8	200.8
Beryllium, Total	<	2.00	UG/L	07/16/14	200.8	200.8
Cadmium, Total	<	2.00	UG/L	07/16/14	200.8	200.8
Chromium, Total	<	5.00	UG/L	07/16/14	200.8	200.8
Copper, Total		28.8	UG/L	07/16/14	200.8	200.8
Lead, Total		25.5	UG/L	07/16/14	200.8	200.8
Thallium, Total	<	1.00	UG/L	07/16/14	200.8	200.8
Nickel, Total	<	10.0	UG/L	07/16/14	200.8	200.8
Silver, Total	<	10.0	UG/L	07/16/14	200.8	200.8
Zinc, Total		411	UG/L	07/16/14	200.8	200.8
Antimony, Total	<	2.00	UG/L	07/16/14	200.8	200.8
Selenium, Total	<	10.0	UG/L	07/16/14	200.8	200.8
Mercury, Total	<	0.05	UG/L	07/09/14	200.8	200.8

Summary

Labs performing analysis on this Sample:
Metals GCMS

SOURCE: WILCOX

SAMPLERS COMMENTS:
(b) (6) ; WR-1

SAMPLE RECEIVING COMMENTS:
ICE; SAMPLE= 1.3

ANALYST`S COMMENTS:

* * ANALYST Greg Goode

Greg Goode
State Environmental Laboratory